AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously presented) A control method of an automatic cleaning device of an submerged surface in liquid comprising:

- a chassis carrying a device for filtration of the liquid;
- units for driving of the chassis on the submerged surface to be cleaned;
- drive motor means of the chassis on the submerged surface comprising at least one electric drive motor of the chassis on the submerged surface, supported by the chassis and arranged to transmit motor movement to at least part of the units for driving of the chassis on the submerged surface;
- electronic supply and control means of each electric drive motor of the chassis on the submerged surface, adapted to be able to control reversal of the drive direction of the units for driving of the chassis on the submerged surface, wherein:
- at least one electric variable providing a value representative of the load torque of the at least one electric drive motor arranged to transmit motor movement to at least part of the units for driving of the chassis on the submerged surface is measured periodically;
- each value obtained at a predetermined threshold value representative of a maximum acceptable value is compared, and in the event where said threshold value is

exceeded for at least one electric drive motor of the chassis on the submerged surface, a procedure is triggered, said saving procedure, in which:

- control at least of this or these electric drive motors of the chassis on the submerged surface is reversed so as to engender displacement of the device in a direction opposite its direction of initial displacement;
- and displacements of the device are controlled, suitable for having it follow a trajectory enabling it to deviate from the initial trajectory it was following when said threshold value was exceeded.

2. (Previously Presented) The method for guiding a cleaning device as claimed in Claim 1, in which when said threshold value is exceeded, periodic measurements are taken of the variable(s) representative of the load torque of the electric drive motor of the chassis on the submerged surface, and the saving procedure is triggered only if the values obtained remain greater than said threshold value during a predetermined dwell time.

3. (Previously Presented) The method for guiding a cleaning device as claimed in Claim 2, in which when said threshold value is exceeded, and during the dwell time, the electrical variable(s) representative of the load torque of the electric drive motor of the chassis on the submerged surface is measured with a measuring frequency greater than the measuring frequency applied in the absence of exceeding said threshold value.

4. (Previously Presented) The method for guiding a cleaning device as claimed in Claim 1, wherein periodic measurements are taken of the electrical variable(s) representative of the load torque of the electric drive motor of the chassis on the submerged surface during each saving procedure, and in the event where said threshold value is exceeded for a predetermined time period after launching this saving procedure, interruption of the power supply of the drive motor means of the chassis on the submerged surface is controlled.

5. (Previously Presented) The method for guiding a cleaning device as claimed in Claim 1, wherein during each saving procedure, displacement of the cleaning device is controlled according to a direction opposite its direction of initial displacement, over a predetermined time period, then at least one of said electrical drive motors of the chassis on the submerged surface is reversed whereof the value obtained has exceeded the threshold value, and rotation of the cleaning device suitable for having it deviate from its initial trajectory is controlled.

6. (Previously Presented) The method for guiding a cleaning device as claimed in Claim 1, wherein displacement of the cleaning device is controlled according to a direction opposite its direction of initial displacement during each saving procedure, during a predetermined time period, then at least one of said electric drive motors of the chassis on the submerged surface is reversed again so as to again control displacement of the device in the direction of initial displacement.

7. (Previously Presented) The method for guiding a cleaning device as claimed in Claim 1, wherein displacement of the device in the direction opposite the direction of initial displacement is controlled during each saving procedure for a period of less than 30s.

8. (Currently amended) The method for guiding a cleaning device as claimed in Claim 1, whereof the drive motor means of the chassis on the submerged surface comprise at least one motor with continuous current supplied by means of an electric current of predetermined average voltage U_{ave}, ~~as claimed in Claim 1,~~ wherein periodic measuring of the electrical variable(s) includes periodically generating brown-outs of the feed of the drive motor means of the chassis on the submerged surface, measuring the electromotor force engendered by these drive motor means of the chassis on the submerged surface during each brown-out, and calculating a value representative of the load torque by comparison between the average voltage U_{ave} and the measured electromotor force.

9. (Previously Presented) The method for guiding a cleaning device as claimed in Claim 8, wherein during each brown-out, the rotation speed of the drive motor means of the chassis on the submerged surface is calculated, proportional to the electromotor force generated by the latter, this rotation speed is compared to a stored set rotation speed, and in the event of difference between the measured and stored rotation speeds, the average supply voltage U_{ave} is adjusted so as to minimize the difference between the effective rotation speed and the set value.

10. (Previously presented) An automatic cleaning device for an submerged surface in liquid, comprising:

- a chassis supporting a filtration device for liquid;
- units for driving of the chassis on the submerged surface to be cleaned;
- drive motor means of the chassis on the submerged surface comprising at least one electric drive motor of the chassis on the submerged surface supported by the chassis and arranged to transmit motor movement to at least part of the units for driving of the chassis on the submerged surface;
- electronic supply and control means of each electric drive motor of the chassis on the submerged surface adapted to be able to control reversal of drive direction of the units for driving of the chassis on the submerged surface, said device being characterized in that the electronic supply and control means are adapted to:
- periodically measure at least one electric variable representative of the load torque of the at least one electric drive motor arranged to transmit motor movement to at least part of the units for driving of the chassis on the submerged surface;
- compare each value obtained at a predetermined threshold value representative of a maximum acceptable value, and in the event of exceeding said threshold value for at least one electric drive motor of the chassis on the submerged surface:
- reversing control at least of this electric drive motor of the chassis on the submerged surface so as to engender displacement of the device in a direction opposite its direction of initial displacement;

- and control displacements of the device suitable to have it follow a trajectory enabling it to deviate from the initial trajectory it was following when said threshold value was exceeded.

11. (Previously Presented) The cleaning device as claimed in Claim 10 whereof the drive motor means of the chassis on the submerged surface comprise at least one motor with continuous current, powered by means of an electrical current of predetermined average voltage U_{ave}, wherein the electronic supply and control means are adapted, in light of periodic measurements of the electrical variable(s), to periodically generate brown-outs of the supply to the drive motor means of the chassis on the submerged surface, to measure the electromotor force engendered by these drive motor means of the chassis on the submerged surface during each brown-out, and to calculate a value representative of the load torque by comparison between the average voltage U_{ave} and the measured electromotor force.